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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,177	01/16/2002	Theodore T. Pekny	501110.01	3177

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EXAMINER

TRAN, ANDREW Q

ART UNIT	PAPER NUMBER
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2824

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/052,177

Applicant(s)

PEKNY, THEODORE T.

Examiner

Andrew Q. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/28/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of invention of Group I (claims 1-22) in the reply filed on January 31, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Drawings***

The drawings are objected to because :

In Fig. 3, the "gate-induced drain leakage current IL" should be relabeled as --IGIDL--. In Fig. 5, circuit block 464 should be relabeled as --Program/Erase Charge Pump Voltage Switch--. Also in Fig. 5, the arrows on the right side of circuit blocks 406 WSM and 412 I/O Logic should be deleted. Further in Fig. 5, the third arrow pointing to the right bottom side of circuit block 448a should be deleted.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "an input signal" and "a test mode signal" (for example, in claim 1, line 1-2) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show "the discharge controller 300" as described in the specification at page 10, line 25. Any structural

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detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 1, 4, 9 and 13-16 are objected to because of the following informalities:

Claim 1 fails to clearly set forth a preamble and a body of the claim; i.e. missing delineating words such as --comprising-- or --including--. In claim 4, line 16 and 17, "on" should be changed to --to--. In claim 9, line 2, "ground" should be changed to --a ground voltage--. In claim 13, line 2, "ground" should be changed to --a ground voltage--. In claim 14, line 11 and 12, "on" should be changed to --to--. In claim 15, line 2, "modeand" should be changed to --mode and--. In claim 16, line 2, "ground" should be changed to --a ground voltage--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is incomplete as failing to recite the interconnections between claimed elements and features. It is suggested to use terms such as --coupled to-- or --connected to-- to define said interconnections. In addition, numerous claims recite "an input signal" (for example, claim 1, line 1; claim 7, line 3; claim 11, line 3-4 and claim 14, line 4) or "a test mode signal" (for example, claim 1, line 1-2; claim 7, line 7; claim 11, line 5; claim 14, line 10; claim 17, line 12; and claim 20, line 17-18) which are indefinite since the current specification does not clearly describe these signals. In claims 1 and 4, the terms "an input signal" (claim 1, line 1 and claim 4, line 4) incur double inclusion of elements because it is not clear whether said terms refer to same or different "input signal". In claims 1 and 4, the terms "a test mode signal" (claim 1, line 1-2 and claim 4, line 14) incur double inclusion of elements because it is unclear whether said terms refer to same or different "test mode signal". Further in claims 1 and 4, the terms "a high impedance" (claim 1, line 6 and claim 4, line 17) incur double inclusion of elements because it is not clear whether said terms refer to same or different "high impedance". In claim 4, line 4, 5, 6, 10 and 11-12, the terms "the first signal terminal", "the second signal terminal" and "the first and second signal terminals" lack proper antecedent bases. It is suggested to remove "signal" from

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said terms, accordingly. In claim 4, line 13, the term "the reference voltage" lacks proper antecedent basis. It is suggested to change said term to --a reference voltage--.

In claim 14, line 4-5 and 8, the terms "the first and second signal terminals" lack proper antecedent bases. It is suggested to remove "signal" from said terms, accordingly. Also in claim 14, line 9, the term "the reference voltage" lacks proper antecedent basis. It is suggested to change said term to --a reference voltage--.

In claim 17, line 11-12, the term "a row activation signal" is indefinite because there is not found a clear disclosure for said term in the specification.

In claim 20, line 16-17, the term "a row activation signal" is indefinite because there is no clear disclosure for said term in the specification.

It is further noted that numerous claims recite the phrase "adapted to" (for example, claim 1, lines 1, 2 and 3) which has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. See *In re Hutchison*, 69 USPQ 138 (CCPA 1946). It is suggested to remove said phrase "adapted to" in the claims.

### ***Allowable Subject Matter***

Claims 1, 7, 11, 14, 17 and 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 2-6, 8-10, 12-13, 15-16, 18-19 and 21-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chao (US Pat. 4,514,829) describes a word line decoder and driver circuits for high density semiconductor memory.

Brox (US Pat. 6,016,281) describes a memory with word line voltage control.

Matsuzaki et al. (US Pat. 6,307,236) describes a semiconductor integrated circuit device.

Yamauchi (US Pat. 6,333,874) describes a semiconductor memory device having normal and standby modes and a mobile electronic circuit.

Hori et al. (JP 9-135029) describes a gate induced drain leakage (GIDL) current countermeasure technique of implanting phosphorus ions in an N-channel MIS transistor.

Mizuno et al. (JP 2000-357962) describes a technique for reducing a GIDL current.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Q. Tran whose telephone number is (571) 272-1885. The examiner can normally be reached on Mon - Fri 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard T. Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew Q. Tran  
Primary Examiner  
Art Unit 2824

at  
April 23, 2005